

TABLE I

| | | Sample No. | | | | |
|---------------------------------------|--------------------------------|-----------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| | | 1 | 2 | 3 | 4 | 5 |
| Composition (Weight %) | SiO ₂ | 57.8 | 66.3 | 67.4 | 64.3 | 65.9 |
| | Al ₂ O ₃ | 24.6 | 18.2 | 16.6 | 18.0 | 18.2 |
| | Li ₂ O | 2.7 | 2.3 | 2.3 | 2.5 | 2.0 |
| | K ₂ O | 7.0 | 3.4 | 3.5 | 5.0 | 3.4 |
| | TiO ₂ | 2.8 | 1.8 | 3.0 | 3.0 | 1.5 |
| | ZrO ₂ | 3.2 | 1.8 | 1.8 | 2.0 | 1.8 |
| | ZnO | 1.0 | 3.1 | 2.0 | 3.1 | 3.6 |
| | MgO | — | 1.0 | 1.0 | 1.0 | 1.5 |
| | CaO | — | — | — | 0.4 | 0.6 |
| | BaO | — | — | — | 0.5 | 1.4 |
| | B ₂ O ₃ | — | — | 2.0 | — | — |
| | Na ₂ O | 0.4 | — | — | — | — |
| | P ₂ O ₅ | — | — | 0.4 | — | — |
| | As ₂ O ₃ | 0.5 | — | — | 0.2 | 0.1 |
| | Bi ₂ O ₃ | — | 2.1 | — | — | — |
| Condition of crystallization (° C) | | | | | | |
| Temperature of nucleation | | 780 | 780 | 790 | 780 | 780 |
| Temperature of crystal growth | | 1000 | 1000 | 980 | 1050 | 1000 |
| Main crystal | | β -silica solid solution | β -spodumene solid solution | β -spodumene solid solution | β -spodumene solid solution | β -spodumene solid solution |